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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/810,650 | 03/15/2001 | Fumiyoshi Urano | 910094RI | 8670 |

7590

11/01/2005

James E Armstrong IV
Armstrong Westerman Hattori McLeland & Naughton
1725 K Street NW
Suite 1000
Washington, DC 20006

EXAMINER

STOCKTON, LAURA

ART UNIT

PAPER NUMBER

1626

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/810,650

Applicant(s)

URANO ET AL.

Examiner

Laura L. Stockton, Ph.D.

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-14 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 8-14 and 32-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

Claims 7-14 and 32-35 are pending in the application.

Merged Reissue/Reexamination Application

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant". Additionally, these proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)).

Rejections made in the previous Office Action that do not appear below have been overcome. Therefore, arguments pertaining to these rejections will not be addressed.

Response to Amendment

The Declaration under 37 CFR 1.132 filed

December 14, 2004 is insufficient to overcome the rejection of claims 12-14 and 28-31 based upon 35 USC §§102(e) and 103 as set forth in the last Office action because:

(1) the Declaration is directed to subject matter that is broader in scope than the original claims, as discussed above, and which claims and subject matter should be cancelled from the instant application;

(2) the Declaration is an opinion Declaration;

(3) the open language "comprising" is used in claims 12-14 and 28-31 and therefore, other ingredients can be present in the resist material;

and

(4) a Declaration under 37 CFR 1.132 cannot be used to overcome an anticipation rejection.

Claim Objections

Claims 10 and 11 are objected to for being substantial duplicates of claims 8 and 9, respectively (i.e., there is no difference in scope). Claims 13, 32, 33, 34 and 35 are objected to for being substantial duplicates of claims 12, 7 (claims 32 and 33), 8 and 9, respectively. When two claims in an application are duplicates, or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to reject the other as being a substantial duplicate of the allowed claim. M.P.E.P. 706.03(k).

Response to Arguments

Applicants' arguments filed July 21, 2005 concerning the objection of claims 10 and 11 for being substantial duplicates of claims 8 and 9, respectively, have been considered. Applicants assert the argument

in the December 14, 2004 amendment and request to defer canceling duplicate claims pending the allowance of claims 8-11.

Applicants' arguments of December 14, 2004 are as follows. Applicants argue that exact word for word support is not required by 35 USC 112 and since it is admitted in the Office Action that claims 8 and 10 are essentially duplicates, Applicants assert both claims 8 and 10 are supported in the instant specification. In response, claim 10 is a duplicate of claim 8 because both claims define the same species, bis(cyclohexylsulfonyl)diazomethane. However, unlike the language in claim 8, the language in claim 10 is supported by the originally filed specification (column 2, lines 47 and 52) of application no. 07/962,089 (now U.S. Pat. 5,216,135). No persuasive support could be found for the language "cyclic alkyl group in which the alkyl group is hexyl" found in claim 8.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12-14 and 32-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

No persuasive support could be found in the original filed claims or the originally filed specification of 07/962,089 for the following.

a) No persuasive support is found for the language "a reduced light exposure energy photosensitive resist compound" as claimed in claims 12-14. Such language is

not found in the disclosure for the compounds of formula (I), which is contrary to the portions argued by Applicants.

b) No persuasive support is found for the resist compound "at a reduced light exposure energy amount to generate an acid to create a positive tone pattern on a surface having a polymer... by a chemical change with the acid generated from the resist compound by light exposure energy." as claimed in claims 12 and 32-35. Some of such language is found for the "resist material" containing the compound of formula (I) but not the compound itself (column 7, lines 1-13).

c) No persuasive support is found for the language "the photosensitive resist compound is sufficient for a polymer, which is difficultly soluble....by light energy". Some of such language is found for the "resist material" containing the compound of formula (I) and not the compound itself (column 6, lines 15-68; and column 7, lines 1-13).

Response to Arguments

Applicants' arguments filed July 21, 2005 have been considered. Applicants have argued that the present amended claims have support in various portions in the disclosure of U.S. Pat. 5,216,135. However, these showings were not persuasive because in all instances the language was not found and/or the language found was directed to, for example, the "resist material" and not a property of the compounds of formula (I).

Claims 8, 9, 34 and 35 are rejected under 35 U.S.C. 112, first paragraph, the description requirements therein.

The introduction of claim changes which involve narrowing the claims by introducing elements or limitations which are not supported by the as-filed

disclosure is a violation of the written disclosure requirement of 35 U.S.C. 112, first paragraph.

M.P.E.P. 2163.04 and 2163.05. As stated in *Fujikawa v. Wattansasin*, 93 F.3d 1559, 39 USPQ2D 1985 (Fed. Cir. 1996), "a laundry list disclosure of every possible moiety does not constitute a written description of every species in a genus because it would not reasonably lead those skilled in the art to any particular species.

Claims 8, 9, 34 and 35 are rejected under 35 U.S.C. 112, first paragraph, the description therein, for reasons essentially given in the Office Action dated September 6, 2002 {Paper No. 44}, pages 2 and 3. More specifically, in claim 8, the expression "wherein R¹ is a cyclic alkyl group in which the alkyl group is hexyl; and R² is a cyclic alkyl group in which the alkyl group is hexyl" lacks description in the original specification and the original claims. However, there is description in the instant specification of U.S.

Pat. 5,216,135 (column 2, line 52) for
bis(cyclohexylsulfonyl)diazomethane.

Specifically, in claim 9, the expression " where R¹
is a branched alkyl group in which the alkyl group is
butyl; and R² is a branched alkyl group in which the
alkyl group is butyl" lacks description in the original
specification and the original claims. However, there
is description in the instant specification of U.S.
Pat. 5,216,135 (column 2, lines 55 and 56) for
bis(tert-butylsulfonyl)diazomethane and bis(sec-
butylsulfonyl)-diazomethane.

Response to Arguments

Applicants' arguments filed July 21, 2005
concerning the rejection of claims 8 and 9 under 35 USC
§ 112, first paragraph have been fully considered.
Applicants assert the arguments in the
December 14, 2004 amendment and believes these
arguments address and overcomes the rejection.

Applicants' arguments of December 14, 2004 and the responses are as follows.

Applicants argue that the statement "a laundry list disclosure of every possible moiety is not a written description for every species in a genus" is out of context here because it is apparent to the skilled chemist that a "laundry list disclosure of every possible moiety" is not in fact disclosed in the Applicants' priority document.

In response, the language found in claims 8 and 9 is found in Applicants' Japanese priority document. Such language is not found in U.S. Pat. 5,216,135. Since Applicants do not have description for the language in claims 8 and 9 in the instant specification, the issue as to description in the Japanese priority document has no bearing on the 35 U.S.C. 112, first paragraph, rejection herein.

Additionally, note the decision by the Board of Appeals and Interferences on September 24, 1999 {Paper

No. 27} affirming the Examiner in Reexam 90/004812
(which has been merged with the instant application)
and the Judgment on February 1, 2001 by the United
States Court of Appeals for the Federal Circuit {Paper
No. 32} - *In re Wako Pure Chemical Industries*, 00-139.
Further, Claim 3 in the Reexam listed the specific
specie bis(cyclohexylsulfonyl)diazomethane, bis(tert-
butylsulfonyl)diazomethane and bis(sec-
butylsulfonyl)diazo-methane (column 14, lines 50, 53
and 54), which correspond to claimed subject matter of
instant claims 8-11.

The Board decided that claims 2 and 3 lacked
adequate written descriptive support from the Japanese
priority document. The Board stated, "there is no more
guidance in the Japanese application to select a
slightly smaller subgenus than there is to select any
other subgenus ." (page 10, second full paragraph of
the Decision). It is noted that the subject matter of
claims 2 and 3 was not appealed to the CAFC, at

Applicants' choosing, and for the subject matter appealed, claims 1 and 4-6, the position of the Examiner was affirmed. Further, the Examiner cannot ignore a CAFC Judgment (Reexam 90/004812) or a Decision by the Board of Appeals and Interferences (Reexam 90/004812) that relates to any of the claimed subject matter.

Also detailed in the decision by the Board of Appeals and Interferences on September 24, 1999 {Paper No. 27} in the merged Reexam 90/004812 affirming the Examiner, the instant claimed invention lacks adequate written descriptive support in the Japanese priority document. Therefore, claims 8 and 9 lack written description as such.

Claims 13, 14 and 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim

the subject matter which applicant regards as the invention.

Claim 13 does not further limit claim 12. Claims 32 and 33 do not further limit claim 7. Claim 34 does not further limit claim 8. Claim 35 does not further limit claim 9. Claims 13 and 32-35 are directed to the same compounds as that of claims 12, 7, 7, 8 and 9, respectively, (claims from which claims 13 and 32-35 depend) and are rejected since the recitation of an intended utility into the preamble of a compound claim is not considered a further limitation of the claim.

In claims 14 and 33, "excimer" is misspelled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 8-14, 34 and 35 are rejected under 35

U.S.C. 102(e) as being anticipated by Pawlowski et al.

{U.S. Pat. 5,338,641}.

Pawlowski et al. disclose compounds which are embraced by the instant claimed invention and therefore, anticipate the instant claimed invention. See the following table.

| Applicants' Compounds | Pawlowski et al.'s Compounds | Instant Claims Anticipated |
|---|--|----------------------------|
| $\begin{array}{c} R^1SO_2CSO_2R^2 \\ \\ N_2 \end{array}$ | $\begin{array}{c} R-SO_2-C-SO_2-R \\ \\ N_2 \end{array}$ | |
| R ¹ and R ² are each cyclohexyl | Bis(cyclohexylsulfonyl)diazomethane (column 4, line 46) Each R variable represents a cyclohexyl | Claims 8, 10-14 and 34 |

| | | |
|---|--|------------------------|
| R ¹ and R ² are each branched butyl (e.g., iso-butyl) | Bis (2-methyl-propyl-sulfonyl)-diazomethane (column 4, line 33) Each R variable represents a branched alkyl (e.g., 2-methyl-propyl) | Claims 9, 11-14 and 35 |
| R ¹ and R ² are each branched butyl (e.g., sec-butyl) | Bis(1-methyl-propyl-sulfonyl)-diazomethane (column 4, line 32) Each R variable represents a branched alkyl (e.g., 1-methyl-propyl) | Claims 9, 11-14 and 35 |

Response to Arguments

Applicants' arguments filed July 21, 2005 concerning the rejection of the claims under 35 USC § 102(e) have been fully considered. Applicants assert the arguments in the December 14, 2004 amendment and believes these arguments address and overcome the

rejection. Applicants' arguments of December 14, 2004 and the responses are as follows.

Applicants argue that logically having substantial duplicate claims with one defined in the specification and the language of the other found in the priority document, the claims cannot be anticipated under 102(e) because there is admitted continuous support for the claims dating back to the priority document.

In response, firstly, the Board of Appeals and Interferences on September 24, 1999 {Paper No. 27} in Reexam 90/004812 (which has been merged with the instant application) and in the Judgment on February 1, 2001 by the United States Court of Appeals for the Federal Circuit {Paper No. 32} both ruled that Applicants' priority document lacked written description under 35 USC 112, first paragraph. Note, the subject matter of instant claims 8-11 can be found in claims 2 and 3 of said Re-exam. As stated above, the Examiner cannot ignore a CAFC Judgment (Reexam

90/004812) or a Decision by the Board of Appeals and Interferences (Reexam 90/004812) that relates to any of the claimed subject matter.

Secondly, the disclosure of the word "cyclic alkyl" in Applicants' priority document along with various other substituents such a haloalkyl, substituted phenyl, alkoxy, aralkyl, alkenyl, etc., would not lead one skilled in the art to the instant claimed specie.

Applicants argue that the reduced light exposure resist material is not disclosed in Pawlowski et al. Applicants argue that the Declaration filed December 14, 2004 under 1.132 clarifies the empirical differences between the claimed resist material and that of Pawlowski et al. Applicants also argue that Pawlowski et al.'s materials require additional compounds.

In response, instant independent claim 12, as amended, is a photosensitive resist compound of formula (I). Recitation of a intended utility in the preamble

does not impart patentability. Further, the Declaration filed December 14, 2004 under 1.132 has been discussed above. The rejection is deemed proper and therefore, maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 11-14 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlowski et al. {U.S. Pat. 5,338,641}.

Determination of the scope and content of the prior art (MPEP §2141.01)

Applicants claim diazodisulfones. Pawlowski et al. teach diazodisulfones {e.g., α,α -bis(sulfonyl)-

diazomethanes} which are either structurally the same as (see above 102 rejection) or structurally similar to the instant claimed compounds. See in the reference, for example, wherein R represents butyl (including positional isomers - e.g., tert-butyl) or cyclohexyl {column 3, lines 8-15, 40-49, 66-68; column 4, lines 1-2; and especially the compounds in column 4, lines 32-34}.

***Ascertainment of the difference between the prior art and the claims
(MPEP §2141.02)***

The difference between some of the compounds of the prior art and the compounds instantly claimed is that the instant claimed compounds are generically described in Pawlowski et al.

***Finding of prima facie obviousness--rational and motivation (MPEP
§2142-2413)***

The indiscriminate selection of "some" among "many" is *prima facie* obvious, In re Lemin, 141 USPQ 814

(1964). The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (e.g., forms a strong acid on exposure to actinic radiation).

One skilled in the art would thus be motivated to prepare compounds embraced by the reference genus to arrive at the instant claimed compounds with the expectation of obtaining additional beneficial compounds which would be useful in forming a strong acid on exposure to actinic radiation. The instant claimed invention would have been suggested to one skilled in the art and therefore, the instant claimed invention would have been obvious to one skilled in the art.

Response to Arguments

Applicants' arguments filed July 21, 2005 concerning the rejection of the claims under 35 USC § 103 have been fully considered. Applicants argue that

claims 9 and 11 are not obvious as explained on pages 6-9 of the response filed on February 4, 2004.

Applicants assert that claims 12-14 are not obvious over Pawlowski et al. for the reasons stated in the December 14, 2004 amendment. Applicants' previous arguments and the responses are as follows.

Applicants argue that the rejections under 35 U.S.C. § 103 should be rendered moot since Applicants alleged support for the instant claimed invention is found in the Japanese priority document which was filed January 30, 1990, making Pawlowski et al. a non-prior art reference.

Applicants' arguments have been considered but have not been found persuasive. In the decision of *In re Wako Pure Chemical Industries*, 00-139, in comparing Driscoll with the Reexam application, the court states: "this case differs from the present case in that the focus was on only one particular moiety, and there was a need to select only one group, i.e., a piperidine

ring, from among disclosed compounds. In the present case, in contrast, the focus is on two moieties, R^1 and R^2 " (bottom of page 8 and the top of page 9).

Applicants argue Japanese priority document 02-019614 filed January 30, 1990 predates the earliest filing date of Pawlowski et al. and therefore, Pawlowski et al. is not prior art against claims 8-11.

In response, the instant claimed subject matter of claims 8-11 is not adequately described in the Japanese priority document. Note the decision by the Board of Appeals and Interferences on September 24, 1999 {Paper No. 27} affirming the Examiner, and especially claims 2 and 3, in Reexam 90/004812 (which has been merged with the instant application) and the Judgment on February 1, 2001 by the United States Court of Appeals for the Federal Circuit {Paper No. 32} - identified by Applicants as *In re Wako Pure Chemical Industries*, 00-139. Claim 3 in the Reexam listed the specific specie bis(cyclohexylsulfonyl)diazomethane, bis(tert-

butylsulfonyl)diazomethane and bis(sec-butylsulfonyl)diazo-methane (column 14, lines 50, 53 and 54), which correspond to claimed subject matter of instant claims 8-11.

The Board decided that claims 2 and 3 lacked adequate written descriptive support from the Japanese priority document. The Board stated, "there is no more guidance in the Japanese application to select a slightly smaller subgenus than there is to select any other subgenus." (page 10, second full paragraph of the Decision). It is noted that the subject matter of claims 2 and 3 was not appealed to the CAFC, at Applicants' choosing, and that for the subject matter appealed, claims 1 and 4-6, the position of the Examiner was affirmed. In applying the rationale given by the Board and the CAFC to instant claims, there is no guidance in the disclosure in the Japanese priority document to select the subject matter as claimed in instant claims 8-11. Further, the Examiner cannot

ignore a CAFC Judgment (Reexam 90/004812) or a Decision by the Board of Appeals and Interferences (Reexam 90/004812) that relate to any claimed subject matter.

Applicants also argue that claims 12-14 are not obvious based on the working examples in Pawlowski et al., and the use of reduced light exposure energy. Applicants argue that the reaction mechanism of the instant claimed invention is different than that of Pawlowski et al. In response, instant claim 12 is now directed to a photosensitive resist compound, not a process of making or a process of using. Applicants recite an intended use for the compound but intended use is given no weight. For all the reasons given above, the rejections are deemed proper and therefore, are maintained.

Allowable Subject Matter

Claim 7 is free of the art of record for reasons already of record in Paper No. 39, pages 4-5 (dated February 22, 2002). Therefore, claim 7 is allowed.

Conclusion

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed,

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and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

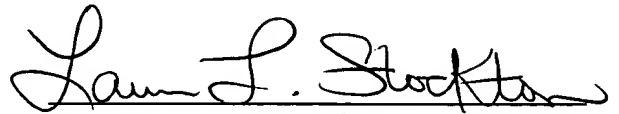
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura L. Stockton whose telephone number is (571) 272-0710. The examiner can normally be reached on Monday-Friday from 6:15 am to 2:45 pm. If the examiner is out of the Office, the examiner's supervisor, Joseph McKane, can be reached on (571) 272-0699.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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The Official fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

A handwritten signature in black ink, appearing to read "Laura L. Stockton", with a horizontal line drawn underneath the signature.

Laura L. Stockton, Ph.D.
Patent Examiner
Art Unit 1626, Group 1620
Technology Center 1600

October 27, 2005